

Work Order ID 73189

Friday, August 26, 2011 7:15:27 AM



Page 1

Item ID: D407-558-045

Accept



Setup Start



Revision ID:

Item Name: Single Cargo Mirror Assembly

Stop



Start Date: 8/26/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 9/9/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: CL Date: 11/08/26

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and type labels as per PPP D407-558-045 and DSI 9436 CHG002

Sulor

MF 11-9-7

110

0.00



Small Fab

Small Fab

Memo

0.00

Small Fab

Assemble as per Dwg D206-558

8/24/09/07

120

0.00



QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

Sulor

QC

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Cust Item ID:

Required Date: 9/9/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
125 	Pick Kit	0.00							
Packaging	Memo	0.00							
Packaging									
130 	QC4- 100% Inspect kits for completeness	0.00							
QC	Memo	0.00							
Quality Control									
140 	Packaging	0.00							
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D407-558-045 and DSI 9436								
	Location: _____								
	PPP Rev: <u>A</u>								

W/O:		WORK ORDER CHANGES					
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Friday, August 26, 2011 7:15:27 AM

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Accept



Setup Start



Revision ID:

Stop



Item Name: Single Cargo Mirror Assembly

Start Date: 8/26/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 9/9/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

n/a/7

mf
11-09-07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries





Friday, August 26, 2011 7:15:24 AM

Parent Item Name: Single Cargo Mirror Assembly

Required Date: 9/9/2011

Required Qty: 1.00

Comments: IPP Rev:A 09-01-15 new issue DD verified by:ec IPP Rev:B
10.06.17 added grommet DD verf:EC IPP REV:C 11.01.19 AS
PER chg002 DD VEF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MS35489-67 		Purchased	No				Each	15.0000		1			
GROMMET													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST296				15					
				111193				15					
AN960JD10 	NAS1149D0363J	Purchased	No			110	Each	0.0000	4	4			
Washer													
D2011-101 		Manufactured	No			110	Each	26.0000	1	1			
6" Mirror													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST226				26					
				70729				26					
D2052 		Manufactured	No			110	Each	4.0000	2	2			
Mounting Bracket													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				4					
				67743				4					

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

Friday, August 26, 2011 7:15:24 AM

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Work Order ID: 73189

Parent Item: D407-558-045

Parent Item Name: Single Cargo Mirror Assembly

Start Date: 8/26/2011

Required Date: 9/9/2011

Start Qty: 1.00

Required Qty: 1.00

D2054 Manufactured No 110 Each 34.0000 2 2



Bushing

Location

Loc Qty

Loc Code

GA

34

67784

34

D2055 Manufactured No 110 Each 2.0000 1 1



Clamp

Location

Loc Qty

Loc Code

GA

2

66184

2

D2056 Manufactured No 110 Each 7.0000 1 1



Bell Crank

Location

Loc Qty

Loc Code

GA

7

71102

7

D2057 Manufactured No 110 Each 29.0000 1 1



Plug

Location

Loc Qty

Loc Code

GA

20

71888

20

ST005

2

60880

2

ST006

7

71103

7

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Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Friday, August 26, 2011 7:15:25 AM

Work Order ID: 73189

Parent Item: D407-558-045

Parent Item Name: Single Cargo Mirror Assembly

Start Date: 8/26/2011

Required Date: 9/9/2011

Start Qty: 1.00

Required Qty: 1.00

D2065 Manufactured No

110 Each

7.0000

1



Arm



[Handwritten signature]

Location

Loc Qty

Loc Code

ST229

7

71104

7

[Handwritten 1]

MS21042L3

Purchased No

110 Each

1,783.000

2



Nut



[Handwritten signature]

Location

Loc Qty

Loc Code

ST300

1783

117441

150

117601

400

117885

233

118451

1000

[Handwritten 2]

MS27039-1-18

Purchased No

110 Each

80.0000

2



Screw



[Handwritten signature]

Location

Loc Qty

Loc Code

ST292

80

115589

80

125 Each

513.0000

4

AN3-4A

Purchased No



Bolt



[Handwritten signature]

[Handwritten 11/6/10]

Location

Loc Qty

Loc Code

ST350

513

104291

213

104625

300

[Handwritten 4]

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Work Order ID: 73189

Parent Item: D407-558-045

Parent Item Name: Single Cargo Mirror Assembly

Start Date: 8/26/2011

Required Date: 9/9/2011

Start Qty: 1.00

Required Qty: 1.00

AN526-1032R9

Purchased

No

125

Each

104.0000

-4-

4



Screw

Location

Loc Qty

Loc Code

ST328

104

116900

4

117395

100

AN960JD10L

NAS1149D0332J

Purchased

No

125

Each

0.0000

6

6



Washer

D2053

Manufactured

No

125

Each

1.0000

1

1



Mounting Bracket

Location

Loc Qty

Loc Code

ST005

1

65837

1

D2067

Manufactured

No

125

Each

11.0000

1

1



Connector

Location

Loc Qty

Loc Code

ST005

11

67403

11

D2071-3

Manufactured

No

125

Each

5.0000

1

1



Cable

Location

Loc Qty

Loc Code

ST222

5

64745

5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 73189

Parent Item: D407-558-045

Parent Item Name: Single Cargo Mirror Assembly

Start Date: 8/26/2011

Required Date: 9/9/2011

Start Qty: 1.00

Required Qty: 1.00

D3778-1

Manufactured No

125 Each

17.0000



Bracket



1

Location

Loc Qty

Loc Code

ST228

17

68695

1

71205

16

MS21042L3

Purchased No

125 Each

1,783.000



Nut



1

Location

Loc Qty

Loc Code

ST300

1783

117441

150

117601

400

117885

233

118451

1000

MS21919-DG5

Purchased No

125 Each

28.0000



Clamp



2

Location

Loc Qty

Loc Code

ST306

28

118077

28

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

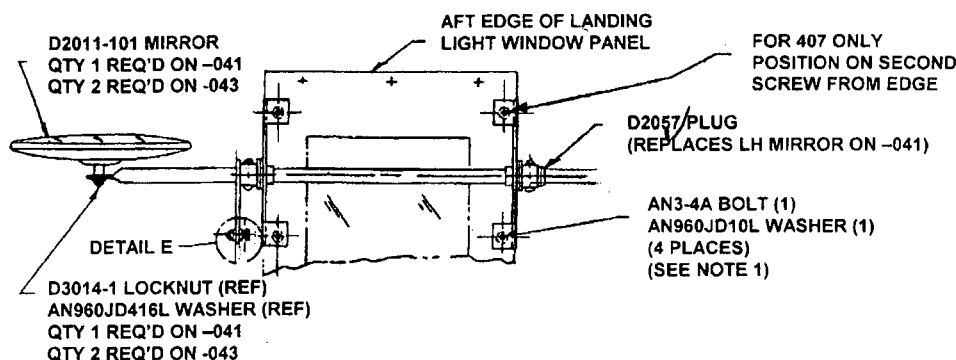


Figure 3: - View C: Looking Down on Mirror Installation
(D206-558-041 Mirror Shown)

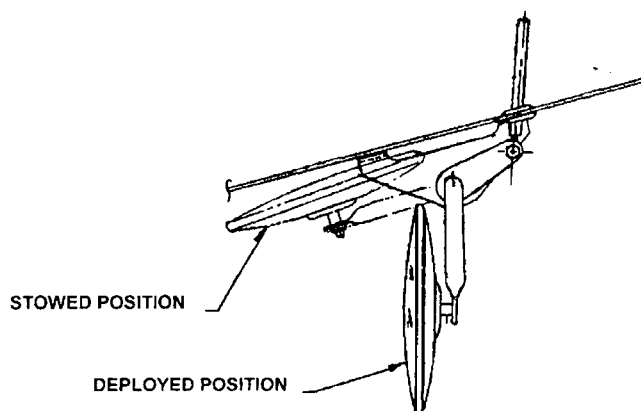


Figure 4: - Detail D: Looking from Side on Mirror Installation
(D206-558-041/-043 Mirror Shown)

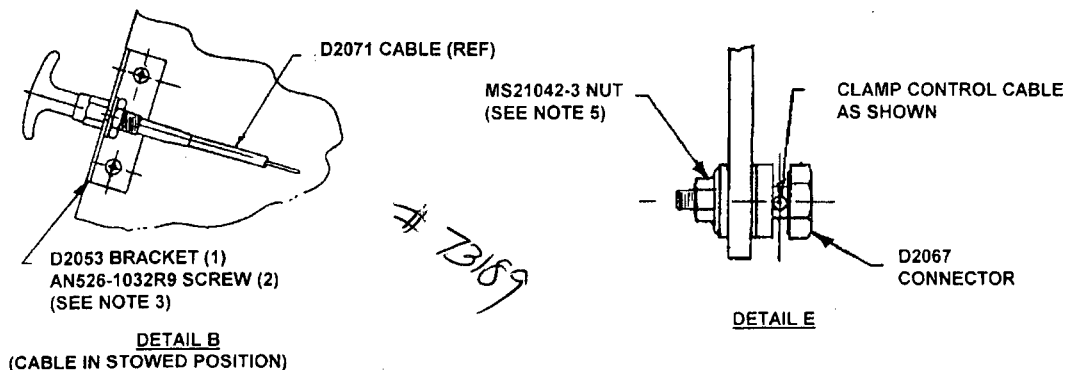
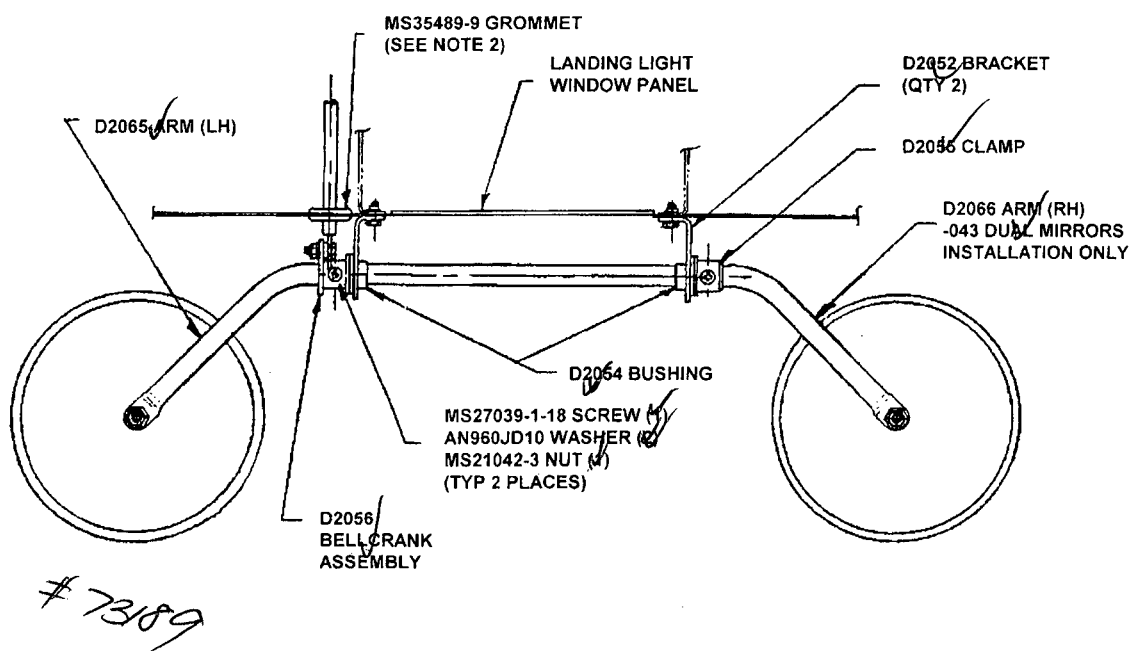


Figure 5: - Details B and E on Mirror Installation
(D206-558-041/-043 Mirror Shown)

3.0 CARGO MIRROR INSTALLATION

Install the Cargo Mirror as follows:

1. Install D206-558-041/-043 cargo mirror assembly using AN3-4A bolts and AN960JD10L washers. Pickup existing anchor nuts in 4 places.
2. Install D2067 connector onto D2056 bellcrank assembly to locate hole for MS35489-9 grommet. With the mirror in the deployed position, mark and drill $\varnothing 0.125$ " (3.2mm) hole in landing light window panel where the grommet should be located. Open pilot hole to $\varnothing 0.563$ " (14.3mm). Install grommet.
3. Install D2053 bracket using AN526-1032R9 screws. Pickup on existing anchor nuts.
4. Position D2071 cable as shown. Install MS21919DG5 clamps using AN526-1032R9 screws where required. Pickup existing rivnuts or anchor nuts if available.
5. Install D2071 control cable using D2067 connector. Connector should rotate freely in bellcrank when MS21042-3 nut is torqued and cable clamped



**Figure 2: – View A: Looking Aft.
(D206-558-043 Mirror Shown)**

REFERENCE ONLY

FROM THIS POINT FORWARD, CUSTOMERS SHOULD ORDER D407-558-045/-047 IN LIEU OF D206-558-041/-043 WHEN PROCURING SINGLE/DUAL MIRRORS FOR BHT 407 MODELS. AMEND SECTIONS 4.0 AND 5.0 OF INSTALLATION INSTRUCTIONS D206-558 REV. C OR EARLIER AND 25.3 AND 25.4 OF ICA-D206-558 REV. 0 AS FOLLOWS:

4.0 WEIGHT AND BALANCE (D206-558 REV. C OR EARLIER) 25.3 WEIGHT AND BALANCE (ICA-D206-558 REV. 0)

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D206-558-041	2.4 lb	+5.0 in	+12.0 in-lb	+14.8 in	+35.5 in-lb
Bell 206A/B/L/L1/L3/L4	1.09 Kg	+0.13 m	+0.14 m-Kg	+0.38 m	+0.41 m-Kg
D206-558-043	3.0 lb	0.0 in	0.0 in-lb	+14.8 in	+44.4 in-lb
Bell 206A/B/L/L1/L3/L4	1.36 Kg	0.0 m	0.0 m-Kg	+0.38 m	+0.52 m-Kg
D407-558-045	2.4 lb	+5.0 in	+12.0 in-lb	+14.8 in	+35.5 in-lb
Bell 407	1.09 Kg	+0.13 m	+0.14 m-Kg	+0.38 m	+0.41 m-Kg
D407-558-047	3.0 lb	0.0 in	0.0 in-lb	+14.8 in	+44.4 in-lb
Bell 407	1.36 Kg	0.0 m	0.0 m-Kg	+0.38 m	+0.52 m-Kg

5.0 PARTS LIST (D206-558 REV. C OR EARLIER) 25.4 PARTS LIST (ICA-D206-558 REV. 0)

Qty -041	Qty -043	Qty -045	Qty -047	Part Number	Description
X				D206-558-041	SINGLE CARGO MIRROR ASSEMBLY
	X			D206-558-043	DUAL CARGO MIRROR ASSEMBLY
		X		D407-558-045	SINGLE CARGO MIRROR ASSEMBLY
			X	D407-558-047	DUAL CARGO MIRROR ASSEMBLY
1	2	1	2	D2011-101	MIRROR ASSEMBLY
2	2	2	2	D2052	BRACKET
1	1	1	1	D2053	BRACKET
2	2	2	2	D2054	BUSHING
1	1	1	1	D2055	CLAMP
1	1	1	1	D2066	BELLCRANK ASSEMBLY
1	1	1	1	D2057	PLUG
1	1	1	1	D2065	ARM
1	1	1	1	D2066	ARM
1	1	1	1	D2067	CONNECTOR
1	1	1	1	D2071	CABLE ASSEMBLY
1	1	1	1	D2071-3	CABLE ASSEMBLY
1	2	1	2	D3044	LOCKNUT
1	1	1	1	D3778-1	BRACKET
4	4	4	4	AN3-4A	BOLT
4	4	4	4	AN526-1032R9	SCREW
1	1	1	2	AN960JD416L	* WASHER
4	4	4	4	AN960JD10	WASHER
6	6	6	6	AN960JD10L	WASHER
3	3	3	3	MS21042-3	NUT (or MS21042L3) (-2)
2	2	2	2	MS21919DG5	CLAMP
2	2	2	2	MS27039-1-18	SCREW
1	1	1	1	MS35489-9	GROMMET
1	1	1	1	MS35489-67	GROMMET

* INCLUDED AS PART OF D2011-101 MIRROR ASSEMBLY

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 08.12.04
CERT. NO.: SH92-17
ISSUE NO.: 7

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		DSI 9436	SHEET 2 OF 2
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DE APPR.		CABLE CHANGE	NTS
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